

Title (en)

A SYSTEM AND METHOD FOR COLOR IMAGE ACQUISITION

Title (de)

SYSTEM UND VERFAHREN ZUR FARBBILDERFASSUNG

Title (fr)

SYSTÈME ET PROCÉDÉ D'ACQUISITION D'IMAGES EN COULEURS

Publication

**EP 3014875 A2 20160504 (EN)**

Application

**EP 14739949 A 20140624**

Priority

- US 201361838525 P 20130624
- IL 2014050566 W 20140624

Abstract (en)

[origin: WO2014207742A2] An imaging system color image acquisition including: an image sensor; a tunable spectral filter arranged in an optical path of light propagation towards the image sensor; and a controller connected to the image sensor and to the tunable spectral filter. The controller is configured and operable for generating a colored image by sequentially operating the tunable spectral filter for sequentially filtering light passing towards the image sensor with three or more different spectral filtering curves during three or more corresponding integration time durations. The tunable spectral filter is configured, as an etalon and includes a pair of reflective surfaces. At least one of the reflective surfaces includes a layer of high refractive index of at least  $n=2.3$  or even higher than 3, or a layer of low refractive index, smaller than  $n=1$ . The configuration of the etalon provide wide transmission peaks of the spectral curves with full-width-half maximum (FWHM) in the range of about 50 to 80 nm, free spectral range (FSR) of at least 300nm, and thickness of the etalon in the order to 1mm or even less.

IPC 8 full level

**G01J 3/26** (2006.01); **H04N 9/04** (2006.01)

CPC (source: CN EP US)

**G01J 3/26** (2013.01 - CN EP US); **G01J 3/51** (2013.01 - CN EP US); **G02B 26/001** (2013.01 - CN EP US); **G06T 3/4015** (2013.01 - US); **H04N 23/843** (2023.01 - CN EP US); **H04N 25/134** (2023.01 - CN EP US)

Citation (search report)

See references of WO 2014207742A2

Citation (examination)

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- WO 2011064403 A1 20110603 - IMEC [BE], et al
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- EP 0693683 A1 19960124 - VAISALA OY [FI]
- US 2005029437 A1 20050210 - HASEGAWA AKIRA [JP], et al
- JP 2009033222 A 20090212 - CASIO COMPUTER CO LTD
- US 6031653 A 20000229 - WANG YU [US]

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

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DOCDB simple family (application)

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